**ASSIGNMENT NO.-6(LINEAR INEQUALITIES)**

**(MATHEMATICS)**

1. Solve the following inequalities:

 $\left(i\right) \frac{1}{2}\left(\frac{3}{5}x+4\right)\geq \frac{1}{3}\left(x-6\right) \left(ii\right) \frac{x+1}{x+2}\geq 1 \left(iii\right) \frac{2x+4}{x-1}\geq 5$

2. Solve : $-5\leq \frac{2-3x}{4}\leq 9.$

3. The cost and revenue functions of a product are given by $C\left(x\right)=2x+400$ and $R\left(x\right)=6x+20$

 respectively,where $x$ is the number of items produced by thhhe manufacturer.How many items

 the manufacturer must sell to realize some profit?

4. In first four papers each of 100 marks ,Rishi got 95 , 72 , 73 ,83 marks.If he wants an average of

 greattter than or equal to 75 marks and less than 80 marks ,find the range of marks he should

 score in the fifth paper.

5. Solve the following inequalities graphically:

 $3x+4y\leq 12 , 4x+3y\leq 12 , x\geq 0 , y\geq 0.$

6. Solve the following inequalities graphically:

 $3x+4y\geq 12 , y\geq 1 , x\geq 0.$

7. Solve the following inequalities graphically:

 $ 2x+3y\geq 3 ,3x+4y\leq 18 , -7x+4y\leq 14 , x-6y\leq 3 , x\geq 0 , y\geq 0.$

8. A solution of 8% boric acid is to be diluted by adding a 2% boric solution to it.The resulting

 mixture is to be more than 4% but less than 6% boric acid.If there are 640 litres of the 8% solution

 , how many litres of 2% solution will have to be added?